

TRAITÉ DE COOPÉRATION EN MATIÈRE DE BREVETS

PCT

RAPPORT PRÉLIMINAIRE INTERNATIONAL SUR LA BREVETABILITÉ (chapitre I du Traité de coopération en matière de brevets)

(règle 44bis du PCT)

Référence du dossier du déposant ou du mandataire 346980 D 21726 FT	POUR SUITE À DONNER		Voir le point 4 ci-dessous
Demande internationale no. PCT/FR2004/002848	Date du dépôt international (<i>jour/mois/année</i>) 05 November 2004 (05.11.2004)	Date de priorité (<i>jour/mois/année</i>) 06 November 2003 (06.11.2003)	
Classification internationale des brevets (8 ^e édition, sauf indication d'une #dition ant#rieure) Voir les informations pertinentes dans le formulaire PCT/ISA/237			
Déposant METABOLIC EXPLORER			

1.	Le présent rapport préliminaire international sur la brevetabilité (chapitre I) est établi par le Bureau international au nom de l'administration chargée de la recherche internationale selon la règle 44bis.1.a).																								
2.	Ce RAPPORT comprend un total de 6 feuilles, y compris la présente feuille de couverture. Dans les feuilles jointes, toute référence à l'opinion écrite de l'administration chargée de la recherche internationale doit être entendue, à la place, comme une référence au rapport préliminaire international sur la brevetabilité (chapitre I).																								
3.	Le présent rapport contient des indications relatives aux points suivants : <table style="width: 100%; margin-top: 10px;"> <tr> <td style="width: 10%; text-align: center;"><input checked="" type="checkbox"/></td> <td style="width: 30%;">Cadre n° I</td> <td style="width: 60%;">Base de l'opinion</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Cadre n° II</td> <td>Priorité</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Cadre n° III</td> <td>Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Cadre n° IV</td> <td>Absence d'unité de l'invention</td> </tr> <tr> <td style="text-align: center;"><input checked="" type="checkbox"/></td> <td>Cadre n° V</td> <td>Déclaration motivée selon l'article 35.2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Cadre n° VI</td> <td>Certains documents cités</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Cadre n° VII</td> <td>Certaines irrégularités relevées dans la demande internationale</td> </tr> <tr> <td style="text-align: center;"><input type="checkbox"/></td> <td>Cadre n° VIII</td> <td>Certaines observations relatives à la demande internationale</td> </tr> </table>	<input checked="" type="checkbox"/>	Cadre n° I	Base de l'opinion	<input type="checkbox"/>	Cadre n° II	Priorité	<input type="checkbox"/>	Cadre n° III	Absence de formulation d'opinion quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle	<input type="checkbox"/>	Cadre n° IV	Absence d'unité de l'invention	<input checked="" type="checkbox"/>	Cadre n° V	Déclaration motivée selon l'article 35.2) quant à la nouveauté, l'activité inventive et la possibilité d'application industrielle; citations et explications à l'appui de cette déclaration	<input type="checkbox"/>	Cadre n° VI	Certains documents cités	<input type="checkbox"/>	Cadre n° VII	Certaines irrégularités relevées dans la demande internationale	<input type="checkbox"/>	Cadre n° VIII	Certaines observations relatives à la demande internationale
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4.	Le Bureau international communiquera le présent rapport aux offices désignés conformément aux règles 44bis.3.c) et 93bis.1 mais pas avant l'expiration du délai de 30 mois à compter de la date de priorité (règle 44bis.2), sauf si le déposant a présenté une requête expresse à cet égard en vertu de l'article 23.2).																								

Bureau international de l'OMPI 34, chemin des Colombettes 1211 Geneva 20, Switzerland no de télécopieur +41 22 338 82 70	Date d'établissement du présent rapport 29 August 2006 (29.08.2006) Fonctionnaire autorisé <div style="text-align: center; font-weight: bold; font-size: 1.2em;">Beate Giffo-Schmitt</div> e-mail: pt03@wipo.int
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PATENT COOPERATION TREATY

TRANSLATION

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43bis.1)

To:

Date of mailing (day/month/year) **See form PCT/ISA/210**

Applicant's or agent's file reference

346980 D 21726 FT

FOR FURTHER ACTION

See paragraph 2 below

International application No.

PCT/FR2004/002848

International filing date (day/month/year)

05.11.2004

Priority date (day/month/year)

06.11.2003

International Patent Classification (IPC) or both national classification and IPC

C12N9/02, C12P13/00, C12P7/00, C12P33/00

Applicant

METABOLIC EXPLORER

1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/EP

Authorized officer

Facsimile No.

Telephone No.

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/FR2004/002848

Box No. I

Basis of this opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rule 12.3 and 23.1(b)).
2. With regard to any nucleotide and/or amino acid sequence disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material
☒ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material
☒ in written format
☒ in computer readable form
 - c. time of filing/furnishing
☒ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☒ In addition, in the case that more than one version or copy of a sequence listing and/or table(s) relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/FR2004/002848

Box No. V	Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement		
1. Statement			
Novelty (N)	Claims	3-8	YES
	Claims	1, 2, 9-13	NO
Inventive step (IS)	Claims	3-8	YES
	Claims	1, 2, 9-13	NO
Industrial applicability (IA)	Claims	1-13	YES
	Claims		NO
2. Citations and explanations:			
Reference is made to the following documents:			
<p>D1: EP-A-1 170 376 (AJINOMOTO CO., INC) 9 January 2002 (2002-01-09)</p>			
<p>D2: CALHOUN MELISSA W ET AL: "Demonstration of separate genetic loci encoding distinct membrane-bound respiratory NADH dehydrogenases in Escherichia coli" JOURNAL OF BACTERIOLOGY, vol. 175, no. 10, 1993, pages 3013-3019, XP002324517 ISSN: 0021-9193</p>			
<p>D3: YAMAGUCHI MUTSUO ET AL: "Proton-translocating nicotinamide nucleotide transhydrogenase of Escherichia coli: Involvement of aspartate 213 in the membrane-intercalating domain of the beta subunit in energy transduction" JOURNAL OF BIOLOGICAL CHEMISTRY, vol. 270, no. 28, 1995, pages 16653-16659, XP002324466 ISSN: 0021-9258</p>			
<p>1). The present application fails to comply with the requirements of PCT Article 33(1) since the subject</p>			

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/FR2004/002848

Box No. V

Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

matter of claims 1, 2 and 9-13 does not meet the requirement of novelty defined in PCT Article 33(2).

Document D1 describes a strain of *Escherichia* or of *Corynebacterium* in which the *ndh* gene encoding NDH-II (quinone oxidoreductase) is disrupted.

Furthermore, these strains comprise one or more selection marker gene(s) and they are used for the production of amino acids or of nucleic acids.

Therefore, D1 destroys the novelty of claims 1, 2 and 9-13.

Document D2 describes a strain of *Escherichia coli* which has a deletion of one or more gene(s) (*ndh*, *nuo*) encoding a quinone oxidoreductase. Furthermore, this strain comprises one or more selection marker gene(s).

Therefore, D2 destroys the novelty of claims 1, 2 and 9-11.

Document D3 describes a strain of *Escherichia* in which a gene encoding a transhydrogenase involved in one or more NADPH-oxidizing activity or activities is destroyed. Furthermore, this strain comprises one or more selection marker gene(s).

Therefore, D3 destroys the novelty of claims 1, 2 and 9-11.

2). The combination of the features of claims 3-8 is not included in the prior art and does not ensue therefrom in an obvious manner for the following reasons:

the closest prior art document (D1) does not suggest strains also comprising modifications which make it

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.

PCT/FR2004/002848

Box No. V

Reasoned statement under Rule 43bis.1(a)(I) with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement

possible to promote one or more NADP⁺-reducing enzymatic
activity or activities.